AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1.   (Currently Amended) A method in a packet data communication system for allocating user dedicated control channels on an available radio channel resource for transmission of control signals, wherein a first delay sensitive user application and at least a second user application, which is less delay sensitive than the first user application, are assigned for user data transmissions on a packet data traffic channel, the method comprising the steps of:

allocating a ~~first logical control channel~~ packet slow associated control channel, PSACCH, associated with the first user application on a first part of the available radio channel resource; and

allocating a ~~second logical control channel~~ packet timing advance control channel, PTCCH, associated with the at least second user application on a second part of the available radio channel resource.

2.   (Original) The method of claim 1, wherein the ratio between said first and second parts of said available radio channel resource is selected based on a network configuration.

3.   (Original) The method of claim 1, wherein the ratio between said first and second parts of said available radio channel resource is selected based on said first and at least second user applications.

4.   (Original) The method of claim 1, wherein the ratio between said first and second parts of said available radio channel resource is 50%.

5.   (Canceled)

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6.   (Currently Amended) The method of ~~claim 5~~ claim 1, wherein said allocated PSACCH is assigned for transmission in an uplink direction of measurement reports.

7.   (Currently Amended) The method of ~~claim 5~~ claim 1, wherein said allocated PSACCH is assigned for transmission in a downlink direction of system-specific information.

8-9.   (Canceled)

10.   (Previously Presented) A method in a packet data communication system for allocating user dedicated control channels on an available radio channel resource for transmission of control signals, wherein a first delay sensitive user application and at least a second user application, which is less delay sensitive than the first user application, are assigned for user data transmissions on a packet data traffic channel, the method comprising the steps of:

allocating a first logical control channel associated with the first user application on a first part of the available radio channel resource according to a first predetermined repetition pattern within a superframe structure; and

allocating a second logical control channel associated with the at least second user application on a second part of the available radio channel resource according to a second predetermined repetition pattern within said superframe structure;

wherein said first and second predetermined repetition patterns are selected such that said first and second logical control channels and packet data traffic channel are allocated on a same timeslot within said superframe structure.

11.   (Previously Presented) The method of claim 10, wherein each of said first and second logical control channel is allocated on the same timeslot in one frame at a time.

12. (Previously Presented) The method of claim 11, wherein each of said first and second logical control channel is allocated on the same timeslot in every second frame of said one frame at a time.

13. (Previously Presented) The method of claim 11, wherein each of said first and second logical control channel is allocated on the same timeslot in four consecutive frames of said one frame at a time.

14. (Currently Amended) A packet data communication system comprising:

a plurality of base stations for radio communication with mobile stations of user data over packet data traffic channels;

a radio transmission control node for controlling operation of said plurality of base stations; and

a scheduler associated with each of the plurality of base stations, wherein the scheduler operates to:

allocate a first logical control channel associated with a first user application on a first part of an available radio channel resource; and

allocate a second logical control channel associated with at least a second user application on a second part of the available radio channel resource[[,]]; and

allocate the first logical control channel on the available radio channel resource according to a first predetermined repetition pattern within a superframe structure,

wherein the at least second user application is less delay sensitive than the first user application.

15. (Original) The system of claim 14, wherein said radio transmission control node is a base station control node BSC.

16. (Previously Presented) The system of claim 14, wherein a ratio between said first and second parts of said available radio channel resource is selected based on a network configuration.

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17. (Previously Presented) The system of claim 14, wherein a ratio between said first and second parts of said available radio channel resource is selected based on said first and at least second user applications.

18. (Previously Presented) The system of claim 14, wherein a ratio between said first and second parts of said available radio channel resource is 50%.

19. (Previously Presented) A packet data communication system comprising:

a plurality of base stations for radio communication with mobile stations of user data over packet data traffic channels;

a radio transmission control node for controlling operation of the plurality of base stations; and

a scheduler associated with each of the plurality of base stations, wherein the scheduler operates to:

allocate a first logical control channel associated with a first user application on a first part of an available radio channel resource, wherein said first logical control channel is a packet slow associated control channel, PSACCH; and

allocate a second logical control channel associated with at least a second user application on a second part of the available radio channel resource, wherein said second logical control channel is a packet timing advance control channel, PTCCH,

wherein the at least second user application is less delay sensitive than the first user application.

20. (Previously Presented) The system of claim 19, wherein said scheduler further operates to assign said allocated PSACCH for transmission in an uplink direction of measurement reports.

21. (Previously Presented) The system of claim 19, wherein said scheduler further operates to assign said allocated PSACCH for transmission in a downlink direction of system-specific information.

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22.   (Canceled)

23.   (Currently Amended) The system of ~~claim 22~~ claim 14, wherein said
scheduler further operates to allocate said second logical control channel on said
available radio channel resource according to a second predetermined repetition pattern
within said superframe structure.

24.   (Previously Presented) A packet data communication system comprising:

a plurality of base stations for radio communication with mobile stations of user
data over packet data traffic channels;

a radio transmission control node for controlling operation of the plurality of base
stations; and

a scheduler associated with each of the plurality of base stations, wherein the
scheduler operates to:

allocate a first logical control channel associated with a first user application on a
first part of an available radio channel resource according to a first predetermined
repetition pattern within a superframe structure; and

allocate a second logical control channel associated with at least a second user
application on a second part of the available radio channel resource according to a
second predetermined repetition pattern within the superframe structure,

wherein the at least second user application is less delay sensitive than the first
user application, and wherein said scheduler further operates to select said first and
second predetermined repetition patterns such that said first and second logical control
channels and packet data traffic channel are allocated on a same timeslot within said
superframe structure

25.   (Previously Presented) The system of claim 24, wherein said scheduler
further operates to allocate each of said first and second logical control channel on
timeslot in one frame at a time.

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26. (Previously Presented) The system of claim 25, wherein said scheduler further operates to allocate each of said first and second logical control channel on timeslot in every second frame of said one frame at a time.

27. (Previously Presented) The system of claim 25, wherein said scheduler further operates to allocate each of said first and second logical control channel on timeslot in four consecutive frames of said one frame at a time.

28. (Canceled)